

### REMARKS/ARGUMENTS

This Amendment is submitted in response to the Office Action mailed November 27, 2007. The deadline for responding expires on February 27, 2008.

Applicants representative hereby requests an interview prior to the next office action if the Examiner intends to maintain any of the current rejections. **The Examiner is requested to call Applicant's undersigned representative Michael P. Straub at 732-542-9070 to schedule the requested interview.**

#### **I. Introduction**

Claims 1-29 are pending in the application. Claims 1-29 are rejected. In the office action the Examiner objected to the specification and indicated that new application papers with lines 1-1/2 or double spaced on good quality paper were required. Applicant is submitting therewith a substitute specification with 1 -1/2 line spacing. Applicant's undersigned representative hereby states **that the substitute specification includes no new matter.**

In the office action the Examiner objected to the claims indicating that substitute claims with lines one and one-half or double spaced were required. This amendment includes a substitute set of claims with one and one-half spaced lines.

In addition to objecting to the line spacing, the Examiner objected to claim 14-23 and 29 because of wording issues with regard to claims 14 and 29. Claims 14 and 29 have been amended in the manner suggested by the Examiner thereby overcoming the claim objections. In view of the submission of the substitute claim set and the amendments

to claims 14 and 29 it is submitted that the objections to the claims have been overcome.

As will be discussed below, all of the claims are definite and none of the pending claims are anticipated or rendered obvious by the applied references.

## **II. The Rejections under 35 USC §101**

In the Office Action, the Examiner rejected claim 29 as being directed to a non-statutory subject matter stating: "In claim 29, 'computer readable medium' is being recited; however, computer readable medium would reasonably be interpreted by one of ordinary skill in the art as software, per se.

Applicant respectfully submits that one of ordinary skill in the art would know that "a computer readable medium" is a physical device NOT software per se. Consider for example, a Read Only Memory (ROM) or Random Access Memory (RAM) which are but a few examples of "computer readable medium". One of ordinary skill in the art would know that a ROM or a RAM is not software per se but the very fact that a ROM or RAM are physical devices which can exist without software being stored thereon. Certainly the Examiner should appreciate that one of ordinary skill in the art buying a blank RAM would not think he or she is buying software. Applicant makes the point because what claim 29 is directed to is NOT "software per se" but rather a **"computer readable medium" (a physical device) embodying machine executable instructions for controlling a communications device.**

Since claim 29 is **NOT directed to software per se** the rejection under 35 USC 101 should be withdrawn.

### **III. The Rejections under §103**

Claims 1-28 stand rejected under 35 USC §103 based on an Examiner proposed combination of US publication 2003/0123383 (the Korobkov et al. publication) in view of Shattil et al (US Pub. Number 2003/014765).

Applicant notes that the Examiner's rejection is based on a miss-interpretation of the Korobkov et al. reference and that it should be appreciated that when properly interpreted one of ordinary skill in the art would not be motivated to make the combination proposed by the Examiner.

**In the rejection the Examiner confuses SUB-CHANNELS with sub-carriers. This is a non-trivial miss-interpretation of the reference** particularly since the claim recites subcarriers NOT subchannels. Furthermore, when the Examiner comes to appreciate that the OFDM TX modulators 52(1)-52(j) correspond to subchannels, it should be appreciated that inserting them into the Shattil et al. reference as the Examiner suggests does not make sense.

In the rejection the Examiner states:

... Korobkov et al., discloses ...  
a plurality of M separate  
subcarrier signals paths (figure 6)  
operating in parallel, teaches each of  
the M subcarrier signal paths including  
a programmable signal generator (52(1)-  
52(j) in figure 3) coupled to said  
frequency control circuit (55 in figure  
3), and a filter circuit 54 in figure  
3, par 0040, lines 1-12), said  
programmable signal generator for  
generating a subcarrier signal

determined by said frequency control circuit and having a subcarrier frequency corresponding to said subcarrier signal path to which said signal generator corresponds (figure 3, par 0040, lines 1-12) ...

Note that in contrast to the Examiner's description of elements 52(I)-52(j) in figure 3 as programmable signal generators, the reference refers to them as OFDM transmission (TX) engines or modulators **for generating J OFDM sub-channels NOT subcarriers.** (See [0040] lines 7-8.)

The elements 52(I)-52(J) is indicated to be similar to the baseband transmitter 10 shown in Figure 1 and each includes an FEC coder 14, spectrum builder 16, IFFT block 18 and cyclic extension block 20 (See [0040] last sentence)

Note that the IFFT block 18 of the element 52(I) modulates a set of N complex values onto the N OFDM sub-carriers corresponding to a subchannel. (See paragraph 0017) Accordingly, it should be appreciated that the applied reference is not discussing a programmable signal generator for individual sub-carriers as the Examiner asserts but rather processing groups of sub-carriers to generate an OFDM signal corresponding to a sub-channel.

**The actual sub-carrier signal processing is not as asserted by the Examiner or as recited in the pending claims.** Since the Korobkov et al. patent does not disclose the features for which it is cited, as a result of an apparent miss-understanding by the Examiner between sub-channels and sub-carriers, the rejection of the pending claims should be withdrawn.

**Since all of the claim rejections are based on the same miss-understanding with regard to the Korobkov et al.**

reference, all of the pending claim rejections should be withdrawn.

With regard to the Examiner's proposal to insert elements 52(I)-52(J) into Shattil, it is respectfully submitted that inserting such transmitter modules which process multiple subcarriers onto the path of individual carriers or tones does not make sense and would not be obvious or desirable. Accordingly, the Examiner proposed combination is not obvious and even if made would not result in the claimed invention.

In view of the above, it should be appreciated that claim 1 is patentable because it recites:

A frequency hopping communications device for transmitting signals on a plurality of M subcarrier signals in parallel, each of said M subcarrier signals corresponding to a different one of M subcarrier signal frequencies, said M subcarrier signal frequencies being a subset of N subcarrier frequencies on which said communications device may transmit signals over time, where M and N are positive integers and where  $M < N$ , said frequency hopping communications device including:

a frequency control circuit for controlling which of the N subcarrier frequencies are generated and used by said device for the transmission of signals;

**a plurality of M separate subcarrier signals paths** operating in parallel, **each of the M subcarrier signal paths including a programmable signal generator coupled to said frequency control circuit**, a power amplification circuit and a filter circuit, said programmable signal generator **for generating a subcarrier signal** determined by said frequency control circuit and having a subcarrier frequency corresponding to said subcarrier signal path to which said signal generator corresponds; and

a combining circuit for combining analog subcarrier signals corresponding to

different subcarrier signal paths prior to transmission.

The other claims are patentable for the same or similar reasons that claim 1 is patentable.

#### **IV. Conclusion**

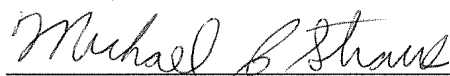
In view of the foregoing amendments and remarks, it is respectfully submitted that the pending claims are in condition for allowance. Accordingly, it is requested that the Examiner pass this application to issue.

If there are any outstanding issues which need to be resolved to place the application in condition for allowance **the Examiner is requested to call (732-542-9070) and schedule an interview with Applicant's undersigned representative.** To the extent necessary, a petition for extension of time under 37 C.F.R. 1.136 is hereby made and any required fee in regard to the extension or this amendment is authorized to be charged to the deposit account of Straub & Pokotylo, deposit account number 50-1049.

None of the statements or discussion made herein are intended to be an admission that any of the applied references are prior art to the present application and Applicants preserve the right to establish that one or more of the applied references are not prior art.

Respectfully submitted,

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